



Stay Young At Heart

University of Michigan Health System

“Stay young at heart” through a healthy diet and lifestyle. According to the CDC, heart disease is the leading cause of death in the United States (1). The CDC also reports that:

- In 2010, an estimated 785,000 Americans had a new coronary event, and about 470,000 had a recurrent attack
- About every 25 seconds, an American will have a coronary event
- About every minute, an American will die from a coronary event.

The following proven heart healthy diet information will help to prevent you from becoming a statistic.

Is there a diet I can follow to prevent heart disease?

The Mediterranean diet may help to reduce the risk of heart disease (2).

In prospective cohort studies, this dietary pattern has been associated with reductions in mortality from a cardiovascular event. A cohort study of 24,444 postmenopausal women who followed this dietary pattern along with three other low-risk lifestyle behaviors was linked to an associated 92% decreased risk of heart attack.

Despite popular belief, however, there is no one specific "Mediterranean Diet."

Some diets exist that are similar in major nutrient categories to the Mediterranean Diet, but differ in fiber content. One example is a four week randomized trial that compared two diets identical in total fat, saturated fat, protein, carbohydrate, and cholesterol content, found that compared with a typical American low fat diet, a diet that used more vegetables, legumes, and whole grains to achieve this content led to significantly greater reductions in total LDL cholesterol concentrations. The second diet had twice as much fiber as the typical US low-fat diet did (both soluble and insoluble).



Mediterranean Diet Components Include a Diet High in:

- Fruits
- Vegetables
- Whole Grains
- Beans
- Nuts
- Seeds
- Olive Oil (fat source)

Low to Moderate Intake of:

- Fish
- Poultry
- Dairy Products

Little Intake of:

- Red Meat



Dietary Components of the Mediterranean Diet

Do Omega-3 Fatty Acids from Fish and Fish Oil help to prevent Cardiovascular Disease?



It has been documented that populations with high intakes of Omega-3 Fatty Acids (for example the Eskimos) have low rates of heart disease (2). Research data has shown that across all populations, the increased intake of fish is associated with lower cardiovascular disease, morbidity and mortality (3).

The Diet and Reinfarction Trial (DART), involved 2033 men after they had experienced a myocardial infarction and were followed for two years. The men were randomly assigned to a group that was instructed to consume about 900 milligrams of EPA and DHA daily, or to a control group that received no specific information. The intervention group experienced 29% reduction risk of mortality and/or morbidity and the incidence of heart attack recurrence reduced 32% (3).

So, how much Omega-3 Fatty acids are recommended to be in your diet?

- Primary prevention: 300-600mg
- Secondary prevention: 900-1200mg
- Triglyceride lowering: 3000-4000mg (3)

****It is important to contact your physician before supplementing.**

The recommended intake of omega-3 fatty acids can be reached by increasing oily fish consumption.

The future of omega-3 fatty acids in the diet may be directed towards individualizing recommendations towards the need of a particular person. An "omega-3 index" has been proposed to be a stronger indicator of cardiac death, and therefore may help to identify those individuals that would benefit from supplementation (3).

Foods high in Omega-3 Fatty Acids:

- Flaxseed Oil= 12,059mg
- Flaxseeds= 8,543 mg
- Fish Oil (various kinds)= ~5,000 mg
- Chia Seeds= 7,164 mg
- Mackerel= 3,367 mg
- Salmon (Atlantic, wild)= 2,843 mg
- Walnuts= 2,776 mg





What does salt restriction do to prevent Cardiovascular Disease?

Studies have consistently proven that a moderate lowering of the daily intake of sodium chloride (salt) from 8-12 grams per day (current) to 5-6 grams per day would have cardiovascular benefits. Finland reduced the dietary salt in processed foods, and from 1972-2002, relative risk for annual mortality due to heart attack fell by 77% and due to stroke by 71% in the age group under 65, and the average life expectancy rose by 6 years for both men and women (4).

The minimum salt requirement is 1 gram per day, and has been demonstrated by indigenous populations. Industrialized countries consume closer to 8-12 grams per day, and a reduction to 5-6 grams per day has been suggested. It may be difficult to achieve the smaller level due to industrialized countries ingesting 75-80% of their daily amounts of dietary salt from processed foods.

If a person can reduce his/her salt intake by 3 grams per day, his/her systolic blood pressure would be expected to be reduced by 1.8 to 3.5 mmHg. Lower systolic blood pressure leads to a relative risk reduction for cardiovascular disease.

In the US, a reduction of salt intake to about 6 grams per day would result in an expected annual reduction of hypertension cases by 11 million and annual cost savings of 18 billion dollars in the healthcare system.

Foods High in Salt:

- Frozen Dinners
- Ready-To-Eat Cereals
- Vegetable Juices
- Canned Vegetables
- Packaged Deli Meats
- Soups
- Marinades and Flavorings
- Spaghetti Sauce
- Salted Nuts
- Potato Chips, Cheese Puffs, Pretzels
- Condiments



Heart Healthy Recipes

Get a healthy dose of Omega-3 Fatty Acids with: Marinated Salmon with Mango-Kiwi Relish

Salmon Ingredients:

- 1 tablespoon honey
- 2 teaspoons low-sodium soy sauce
- 1 teaspoon olive oil
- 1/4 teaspoon black pepper
- 4 (6-ounce) salmon fillets (about 1 inch thick)
- Cooking Spray

Relish Ingredients:

- 1/2 cup diced peeled mango
- 1/2 cup cubed peeled kiwifruit
- 1/4 cup chopped fresh cilantro
- 1/4 cup fresh orange juice

Preparation:

- For salmon, combine first 4 ingredients in a large zip-top placed bag. Add fish to bag; seal. Marinate 10 minutes, turning occasionally.
- While fish marinates, heat grill pan or large nonstick skillet over medium-high heat. Remove fish from bag, discarding marinade. Coat pan with cooking spray. Add fish, and cook 5 minutes on each side or until the fish flakes easily when tested with a fork.
- While fish cooks, prepare relish. Combine mango and the remaining ingredients. Serve over fish.





Heart Healthy Recipes

Heart Healthy Chocolate Cake (with Flaxseeds!)

Ingredients:

- 3/4 cup granulated sugar
- 1/2 cup water
- 4 ounces bittersweet chocolate, chopped
- 2 tablespoons refrigerated or frozen egg product, thawed, or 2 egg yolks, slightly beaten
- 1 teaspoon vanilla
- 1/3 cup all-purpose flour
- 1/4 cup unsweetened cocoa powder
- 1/4 cup ground flax seeds
- 1/4 teaspoon baking powder
- 5 egg whites
- 1/4 cup apricot spreadable fruit
- 2 tablespoons toasted sliced almonds, coarsely chopped



Directions:

- Pre-heat oven to 350 degrees F. Grease and flour a 9x9 inch baking pan; set aside. In a medium saucepan, stir together granulated sugar and water. Cook and stir over medium heat until the sugar dissolves and mixture almost boils. Remove from heat. Add chocolate; stir until melted (mixture may appear slightly grainy). Place egg product in a large bowl. Gradually stir the chocolate mixture into egg product; stir vanilla (mixture may appear slightly grainy). Set aside.
- In a small bowl, stir together the flour, cocoa powder, flax seeds, and baking powder. Add flour mixture to egg product mixture, whisking until smooth. In a medium bowl, beat egg whites with an electric mixer on medium speed until stiff peaks form. Stir a small amount of the beaten egg whites into the chocolate mixture to lighten. Fold remaining egg whites into chocolate mixture. Spread in the prepared pan.
- Bake for 30 minutes. Cool cake in pan on a wire rack for 10 minutes. Remove cake from pan. Cool completely on a wire rack.
- Transfer cake to a cutting board. Using a 3 1/4 inch heart shaped cutter, cut 6 heart-shaped pieces from cake. Stir together spreadable fruit and 2 tablespoons almonds in a small bowl. Spread mixture atop three of the heart-shaped cakes atop the apricot filling on cakes.



Heart Healthy Websites

1. American Heart Association:
www.Heart.org

2. Mayo Clinic:
www.mayoclinic.com/health/heart-healthy-diet

3. WebMD:
www.webmd.com/heart/default.htm

4. American Dietetic Association:
www.eatright.org/Public/content/

5. Eating Well:
www.eatingwell.com/recipes_menus





Heart Healthy Eating References:

1. <http://www.cdc.gov/features/heartmonth/>
2. Tangney, C, Rosenson, R. *“Lipid Lowering with diet or dietary supplements.”*
<http://www.uptodate.com>. February 7, 2011.
3. Vrablik, M, Prusikova, M, Snejdrlava, M, Zlatohlavek, L. *“Omega-3 fatty acids and cardiovascular risk: do we understand the relationship?”* *Physiol. Res.* 58. July 14, 2009.
4. Klaus, D, Hoyer, J, Middeke, M. *“Salt Restriction for the Prevention of Cardiovascular Disease.”* *Deutsches Arzteblatt International.* Pg 457-62. 2010.

For more heart healthy eating information please visit the Healthy Eating Tip of the Month board, located in the University Hospital, 2nd Floor Cafeteria.

Visit the University Hospital Cafeteria located on the 2nd Floor to enter your name into a drawing to win a George Foreman Grill!

June 2011
Healthy Eating Tip of the Month
Created by: Kelsey Schuring
2010-2011 UMHHC Dietetic Intern



For more information, please contact:

Patient Food and Nutrition Services
Nutrition Counseling Center
University Hospital Room #2A-237
1500 E. Medical Center Drive
Ann Arbor, MI 48109

Phone: (734) 936-7527

